## REMARKS

The Office Action dated June 15, 2007 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto. Claims 1 and 3-24 are currently pending in the application and are respectfully submitted for consideration.

The Office Action rejected claims 6 and 23 under 35 U.S.C. §102(b) as being anticipated by Larsson (U.S. Patent No. 6,282,427). The rejection is respectfully traversed for at least the following reasons.

Claim 6 recites a method including triggering a location process, obtaining selection information for selection of at least one measurement device, the selection information including information of measurement devices that have historically provided measurement information that satisfies a predefined criteria, selecting at least one measurement device, and locating user equipment based on measurement information from the selected at least one measurement device.

Claim 23 recites a system comprising triggering means for triggering a location process, obtaining means for obtaining selection information for selection of at least one measurement device, the selection information including information of measurement devices that have historically provided measurement information that satisfies a predefined criteria. The system further comprises selecting means for selecting at least

one measurement device, and locating means for locating user equipment based on measurement information from the selected at least one measurement device.

Therefore, the present invention is directed, in part, to a method in which location measurement units (LMUs) are selected on the basis of which LMUs have historically provided the best quality measurements for a specific area, and not simply based on the quality of the geographical location of the LMUs. The claimed invention can provide better quality location information by selecting LMUs according to the success of past measurements, rather than just selecting LMUs according to the quality of geographical location. For example, "if a mobile station to be located happens to be in a concrete building, even a close-by LMU might not be able to receive it, especially if the LMU is situated on the other side of the building" (Specification, page 6, lines 12-16).

As will be discussed below, Larsson fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the advantages and features discussed above.

Larsson discloses an apparatus and method of selecting location measurement units for measuring an uplink signal transmitted by a mobile communication station operating in a wireless communication network in order to locate the position of the mobile communication station in the wireless communication network. The location measurement units to be used in measuring the uplink signal can be identified by evaluating one or more of relative positional relationships between the possible position of the mobile station and a plurality of further positions respectively associated with a plurality of location measurement units in the network, path loss measures predicted for

each of a plurality of location measurement units relative to the possible position of the mobile station, and geometric dilution of precision (GDOP) values determined for each of a plurality of groups of location measurement units with respect to the possible position of the mobile station.

Applicants respectfully submit that Larsson fails to disclose or suggest all of the elements of the present claims. For example, Larsson fails to disclose or suggest "obtaining selection information for selection of at least one measurement device, the selection information including information of measurement devices that have historically provided measurement information that satisfies a predefined criteria," as recited in claims 6 and 23.

According to embodiments of the present invention, selection information is obtained for the selection of appropriate location measurement devices. The selection information may include historical data regarding the measurement devices that have historically provided measurement information that satisfies predefined criteria. Furthermore, the selection of an appropriate location measurement unit may include self-learning based upon historical quality information of the location measurement devices. The selection may also include the ranking of possible location measurement devices based upon historical quality information of the location measurement units (Specification, paragraphs 0050-0051 and Figure 3).

Larsson, on the other hand, fails to disclose or suggest the use of historical data, i.e. information of measurement devices that have historically provided measurement

information that satisfies a predefined criteria. Larsson merely discloses calculating a rough location area in which the mobile station could possibly be located using the serving cell identity and the Timing Advance Value (Larsson, Column 3, lines 39-42). Next, the MLC searches its database for those location measurement units that are closest to the middle of the location area (Larsson, Column 4, lines 19-21). Larsson fails to disclose or suggest obtaining selection information including information of measurement devices that have historically provided measurement information that satisfies a predefined criteria, as recited in claims 6 and 23. Specifically, Larsson makes no mention of obtaining information regarding location measurement devices that have historically provided measurement information that satisfies a predefined criteria.

Thus, Larsson does not disclose or suggest all of the elements of claims 6 and 23. As such, Applicants respectfully request that this rejection be withdrawn.

Claims 20 and 21 were rejected under 35 U.S.C. §102(e) as being anticipated by Nowak (U.S. Patent No. 6,968,195). This rejection is respectfully traversed for at least the following reasons.

Claim 20 recites a user equipment for a mobile system. The user equipment includes a processor configured to process quality information associated with the quality of results of past location measurements by a plurality of measurement devices of a first type and to provide selection information for selection of which of said plurality of measurement devices of a first type to use for future location determinations based upon

the quality information. The processor is further configured to self-learn based upon the quality information associated with the quality of results of past location measurements.

Claim 21 recites a computer program comprising program code means adapted to perform the following when executed on a computer: providing quality information of results of past location measurements by a plurality of measurement devices of a first type, obtaining selection information for selection which of said plurality of measurement devices of a first type to use for future location determinations based upon the quality information when the program is run on a computer, and self-learning based upon the quality information of the results of past location measurements by the measurement devices.

As will be discussed below, Nowak fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the features discussed above.

Nowak discloses a method and apparatus for managing the selection of location information sources to provide location information for a mobile communications unit. Embedded within a request for location information on a particular mobile communications unit are one or more specifications regarding the quality of the requested location information. The specifications are used to determine if any location information sources are able to provide the location information with the desired location information quality. Upon locating a location information source capable of providing the requested location information, the source is invoked to the particular location information source.

Applicants respectfully submit that Nowak fails to disclose or suggest all of the elements of the present claims. For example, Nowak does not disclose or suggest a processor configured to "self-learn based upon the quality information associated with the quality of results of past location measurements," as recited in claim 20. Similarly, Nowak does not disclose or suggest "self-learning based upon the quality information of the results of past location measurements by the measurement devices," as recited in claim 21.

As outlined in the present specification, embodiments of the present invention include self-learning based upon historical quality information of the location measurement devices (Specification, paragraph 0051). For example, a SMLC may create a self-learning table 16 or similar where available look-up parameters before an Uplink Time Difference Of Arrival (U-TDOA) location attempt, such as cell identities (CI) and timing advance (TA) values or location estimate based on them, are matched with information regarding the success of a respective location measurement unit (LMU) measurements that are obtained after U-TDOA location attempts (Specification, paragraph 0052). In other words, the location server may maintain statistical/history information about which LMUs were able to receive transmissions from a mobile station when certain CI and TA or location estimate based on them were observed. An U-TDOA location measurement unit (LMU) is configured to be self learning based on history data (analysis) which can be used as a selection criteria when selecting proper location measurement units which have provided good quality measurements historically.

Nowak, on the other hand, fails to disclose or suggest self-learning based on the quality information. Nowak only discloses a technique for selecting one of a plurality of types of position determining equipment depending on the accuracy required by the requestor of the location information. In particular, a geographical specification in the location request (e.g. low, medium, high) may be correlated to a particular type of PDE source (Nowak, Column 4, lines 30-35). However, Nowak does not disclose or suggest "self-learning based upon the quality information of the results of past location measurements by the measurement devices," as recited in claim 21 and similarly recited in claim 20. As such, Applicants respectfully request that the rejection of claims 20 and 21 be withdrawn.

Claims 1, 3-5, 7-19, 22, and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Larsson in view of Nowak. The Office Action took the position that Larsson discloses all of the elements of the claims, with the exception of past measurements and the providing selection information comprising self-learning based upon historical quality information associated with the measurement devices. The Office Action then cited Nowak as allegedly curing these deficiencies in Larsson. This rejection is respectfully traversed for at least the following reasons.

Claim 1, upon which claims 2-5 are dependent, recites a method including providing quality information regarding quality of results of past measurements associated with location determination by at least two measurement devices, storing the quality information and identity information associated with the at least two measurement

devices, and providing selection information for selection of measurement devices for future location determinations based upon the stored quality and identity information. The providing selection information comprises self-learning based upon historical quality information associated with the measurement devices.

Claim 7, upon which claims 8-11 are dependent, recites a method including storing historical data of various measurements in a mobile system, selecting at least one measurement device based upon the historical data, and self-learning based upon selected historical data associated with measurement devices.

Claim 12, upon which claims 13-15 are dependent, recites a location system including at least two measurement devices configured to provide measurement data for location determination, a quality controller configured to provide quality information regarding quality of results of past measurements by the at least two measurement devices, a storage configured to store quality information of measurements by the at least two measurement devices, and a selection controller configured to provide selection information for selection of measurement devices for future location determinations based upon quality information that is stored in the storage. The location system is configured to self-learn based upon the quality information regarding the quality of results of past measurements by the at least two measurement devices.

Claim 16, upon which claims 17-19 are dependent, recites a network element for a mobile system. The network element includes a processor configured to process quality information associated with the quality of results of past location measurements by a

plurality of measurement devices and to provide selection information for selection of at least one measurement device for future location determinations based upon the quality information. The processor is further configured to self-learn based upon the quality information associated with the quality of results of past location measurements.

Claim 22 recites a system including providing means for providing quality information regarding quality of results of past measurements associated with location determination by at least two measurement devices, storing means for storing said quality information and identity information associated with the at least two measurement devices, and selecting means for providing selection information for selection of measurement devices for future location determinations based upon the stored quality and identity information. The selecting means comprises self-learning means for self-learning based upon historical quality information associated with the measurement devices.

Claim 24 recites a system comprising storing means for storing historical data of various measurements in a mobile system, selecting means for selecting at least one measurement device based upon the historical data, and self-learning means for self-learning based upon selected historical data associated with measurement devices.

As mentioned above, embodiments of the present invention are directed, in part, to a method in which location measurement units (LMUs) are selected on the basis of which LMUs have historically provided the best quality measurements for a specific area, and not simply based on the quality of the geographical location of the LMUs. The claimed

invention can provide better quality location information by selecting LMUs according to the success of past measurements, rather than just selecting LMUs according to the quality of geographical location.

As will be discussed below, the combination of Larsson and Nowak fails to disclose or suggest all of the elements of the claims, and therefore fails to provide the advantages and features discussed above.

Applicants respectfully submit that the combination Larsson and Nowak fails to disclose or suggest all of the elements of the present claims. For example, Larsson and Nowak, whether viewed individually or combined, do not disclose or suggest "self-learning based upon historical quality information associated with the measurement devices," as recited in claims 1, 7, 12, 16, 22, and 24. As outlined above, embodiments of the present invention include self-learning based upon historical quality information of the location measurement devices (Specification, paragraph 0051).

The Office Action took the position that Nowak discloses self-learning based upon historical quality information associated with the measurement devices. However, as discussed above, Nowak only discloses a technique for selecting one of a plurality of types of position determining equipment depending on the accuracy required by the requestor of the location information. Nowak makes no mention of self-learning based upon historical quality information. In fact, Nowak does not appear to make any mention of historical quality information of the location measurement devices. Larsson, as acknowledged by the Office Action, also does not disclose or suggest this element of the

claims. Accordingly, Applicants respectfully assert that the combination of Larsson and Nowak fails to disclose or suggest all of the elements of claims 1, 7, 12, 16, 22, and 24.

Claims 3-5, 8-11, 13-15, 17-19 are dependent upon claims 1, 7, 12, and 16. Therefore, we may argue that claims 3-5, 8-11, 13-15, 17-19 should be allowed for at least their dependence upon claims 1, 7, 12, and 16.

Applicants respectfully submit that Larsson and Nowak, whether considered alone or in combination, fail to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1 and 3-24 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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